

Minutes of the EPA SAB Science and Technology Review Panel Information Gathering Telephone Conference Meetings

January 23 and 24, 2003

Purpose: The Environmental Protection Agency (EPA) Science Advisory Board s (SAB) Science and Technology Review Panel met via telephone conference on January 23 and January 24, 2003 to gather information on existing EPA Science and Technology programs in order to prepare itself for receipt of the FY 2004 Science and Technology Budget Request which it will review and deliberate upon at a meeting from February 24 to 25, 2003. The meeting also included time for panel members to plan for their review meeting later.

Attendees: The following members participated in the meetings: Drs. Genevieve Matanoski (Chair), William Adams, Richard Bull, Robin Cantor, Dominico Grasso, Hilary Inyang, George Lambert, Maria Morandi, James Watson, and Lauren Zeise. A roster is included at Attachment A. Agency representatives are shown on the sign in sheets (Attachment B). No members of the public participated on either day.

Meeting Summary:

1. Introductions

The Designated Federal Official, Thomas Miller, welcomed people to the call and made some introductory remarks about the nature of the meeting. The Roster and Biographical sketches of members are in Attachment C to these minutes. The agenda is in Attachment D. Mr. Miller noted the following:

- a) This is an INFORMATION GATHERING MEETING of the EPA Science Advisory Board s Science and Technology Review Panel. The purpose is to gather information on the current EPA science and technology activities so that the panel will have sufficient background information to review the EPA FY 2004 S & T Budget Request which will be available the first week of February. The review meeting for that document will be held on February 24 and 25, 2003 in Washington, DC.
- b) This Panel is formed entirely from the EPA Administrator-Appointed membership of the EPA SAB. It is formed around a core of members from the Research Strategies Advisory Committee, a committee appointed expressly for the purpose of reviewing the EPA S&T budget (among other things).

c) The SAB process requires that we consider a number of issues prior to SAB reviews, including:

- i) conflict-of-interest issues which are defined and limited, by law, in 18 U.S. Code 208; and
- ii) a person's perceived impartiality in performing official duties, often referred to as the appearance of impartiality as defined and limited in Title 5, Code of Federal Regulations, Part 2635;
- iii) a person's breadth of expertise, knowledge and experience needed to address the charge; and
- iv) the appropriate panel balance.

To make the **required** determinations **about these factors**, the SAB Staff has reviewed all the information provided by candidates (confidential financial information, resumes and curriculum vitae, and information about points of view on the matter to be discussed). There was no information provided in response to the posting of information about the prospective panel on the SAB website.

If individuals with the appropriate expertise are deemed under-represented on the panel, the SAB Director and/or Deputy Director have the discretion to appoint individuals with the needed expertise from the roster of current SAB members.

d) NO COI/APPEARANCE ISSUES EXIST IN THIS REVIEW: In regard to this panel, the Deputy Ethics Official for the SAB has determined that the legal criteria for making a conflict of interest, or an appearance of impartiality, finding is not met. This is not a particular matter, there are no financial interests that could be impacted by the issue; there is no direct or predictable linkage between the issue and a person's financial interest; etc. Therefore waivers were not a consideration for any participant.

Notwithstanding, the biographical sketches of the panel members are posted on the SAB website for the purpose of providing additional information to those interested. There is also other information posted at that location, including most of the presentation materials that EPA representatives will be talking about today and tomorrow.

That web address is as follows: <http://www.epa.gov/sab/strpanel.html>

Dr. Matanoski then welcomed the members, thanked them for agreeing to serve on the panel, and reminded them of the need to draft a report at the February meeting and then make any needed revisions rapidly so the report can be sent to the Administrator at the earliest time. She

also noted that during the sessions members should consider the need for additional information to enhance their review.

2. Office of the Chief Financial Officer:

FY 2003 Budget: Ms. Laua Miner-Nordstrom was introduced by Dan Malloy of the OCFO. Ms. Miner-Nordstrom will be the primary OCFO contact for the S&T review. Ms. Miner-Nordstrom focused her comments on the FY 2003 request (see Attachment E). She noted the distribution of S&T resources across the various EPA offices. She also noted the FY 2003 major increases and decreases in that budget. She noted that the 2003 appropriation bill was not yet passed by Congress. Latest information indicates that Congress wants to have an approved omnibus budget bill to the President for signature by January 31, 2003. If this does not happen another Continuing Resolution will be necessary. As long as the Agency operates under continuing resolutions, no new projects can be started. She also stated that the FY 2004 request was nearly completed and EPA was to hold a press conference on February 3, 2003 to release its part of the budget. The budget document will be placed on the EPA Internet site at that time. EPA will provide the budget in brief document to the Panel when it is released. The full budget request can be viewed on the website.

Mr. Malloy encouraged the Panel to let EPA know of any additional information it needed in order to carry out its review.

New Strategic Plan: Mr. Chris Hoff discussed the Agency's efforts to update the existing strategic plan. The FY 2004 budget request will be written with a focus on the existing Strategic Plan. He stated that the Government Performance and Results Act (GPRA) required a triennial update of the strategic plan. The new plan will be completed in September 2003. The plan's architecture document (framework) is on the EPA website for public comment. Writing the plan is on a fast track. The framework now talks of five goals instead of the current 10. As a unique addition, each goal will have a Science section included. The goals are Air, Water, Land, Communities and Ecosystems, and Compliance and Environmental Stewardship. A full draft is due to the Office of Management and Budget in March.

Dr. Matanoski stated that the panel could help in the Agency's plan development if desired. Such involvement would serve two purposes, one would be to help the panel understand EPA's program for the future and better prepare us for the next S&T review. Another benefit would be that the panel could provide comments on the developing plan. Mr. Hoff noted that the website has a function that will allow people to comment directly and suggested members could comment in that fashion. Mr. Miller reminded the members that any comments should be offered as those of individuals and not be offered as comments from the SAB.

3. Office of Research and Development

Mr. Kevin Teichman introduced Paul Zeilinski of his staff who gave the ORD presentation.

Mr. Zeilinski discussed the Planning Process used by ORD and the client program offices (See Attachments F, G, H and I). The process includes extensive interaction among ORD and its client offices via Research Coordination Teams and oversight by the Research Coordination Council. Multi-year plans incorporate priorities that are developed in these interactions.

Mr. Zeilinski stated that during February 2003 all 16 multi-year plans will be on the ORD website. Some will be final versions others will be drafts that are undergoing peer review by the SAB, Board of Scientific Counselors, or other groups. Dr. Bull noted that these plans could be useful reference documents for this panel.

Mr. Teichman noted that the multi-year plans are relevant to the S&T review in that the EPA and ORD strategic plans contain important questions and information needs that should be addressed by EPA and others. These needs are addressed further in multi-year plans. The multi-year plans identify what EPA and ORD will do. The focus of the plans is on high priority needs. These are shown as annual performance goals and measures. For any specific year, the budget request reflects the needs that are described in the plans.

Mr. Zeilinski noted that the point of the descriptions of the planning process used is to convey the idea of the substantial amount of effort that is invested in preparing the budget.

Dr. Cantor stated that an issue during last year's review was the level of external coordination occurs during research planning and budget preparation. She was especially interested in the socioeconomics area. Mr. Zeilinski stated that the multi-year guidance instructs staff to be more explicit in describing the coordination that occurs in developing the plans.

Mr. Zeilinski then discussed the improvements to the multi-year planning process that resulted from the SAB review of the process last year. A logic diagram has been added among other things. Dr. Bull congratulated the Agency on the improvements. Dr. Morandi noted that performance measures still seem procedural and not focused on environmental outcomes. Mr. Teichman responded that often the outcomes of agency action are a function of many things in addition to the knowledge generated by ORD. This makes it difficult for ORD to tie its work directly to such outcomes.

Amy Battaglia of the ORD resource staff presented an overview of the FY 2003 budget request (by goal) and noted that if an Omnibus budget bill passes, the Fellows program will be reestablished in 2003 if the bill passes. If additional continuing resolutions emerge, then it can be reestablished. She noted a number of changes included in the 2003 request. That request can also be viewed online at the EPA website. She noted that one of the new starts that is delayed is the \$75 million superfund transfer for research and development on building decontamination research is one of the things on hold pending the 2003 appropriations bill.

Dr. Cantor noted that it would be helpful if the agency could identify the projects that are delayed due to the lack of an appropriations bill.

Ms. Battaglia reminded the panel that the budget would be released on February 3rd. She

said that the normal tables ORD provides will be forthcoming within a week after that. Dr. Vu stated that it would be good to share a crosswalk to the bigger picture to show what other funds support EPA science (e.g., EPM). Dr. Matanoski noted that, later, this might be something that helps us to get a better understanding of the big picture of science at EPA, not just the S&T budget.

4. Office of Solid Waste and Emergency Response (OSWER)

Dr. Anna Treinies, OSWER Science Team, presented the background on the total science and technology program for OSWER. She provided a resource breakout that indicated resource levels for science and technology activities across the program (See Attachment). The levels in the FY 2003 budget (in thousands of dollars) are:

Oil Program	\$ 909.9
LUST	\$ 696.0
Superfund	\$111,168.0
S&T	<u>\$ 9,548.7</u>
TOTAL	\$122,322.6

Dr. Treinies mentioned the various science activities across OSWER in a number of broad areas including: human health, ecological health, multimedia fate and transport, remediation technology, monitoring technology, pollution prevention, and social sciences (e.g., economic cost-benefit assessment and Brownfields redevelopment). Much of the OSWER funds are actually transferred to EPA/ORD for implementing science and technology needs of their office. She noted that the \$75 M carried in the FY 2003 budget s Superfund request for Homeland Security (building decontamination methods, rapid risk assessment, analytical methods, waste disposal) is not available until the appropriation passes. Thus the projects have not yet been started.

Dr. Bull asked for a greater level of detail on the breakout of the aggregated budget categories give. [e.g., for programs discussed, what is the resource allocation for the program from specific appropriations or conversely if an appropriation is given in the aggregate, a more detailed breakout of the total for each of the program components carried within that account (or within that goal or objective or other aggregated category of activity)].

Dr. Cantor asked for information showing the program in three categories, the base program that has existed over time and which is the continuing core of Agency responsibilities (Foundational Investments); the programs that are relatively new (e.g., gained emphasis relatively recently within the last budget cycle or so; and the components that are new in this budget request - things that strengthen EPA s science and keep it at the cutting edge (New and Innovative Investments). The desire is not just for dollar allocations, but information showing the content of the programs.

DFO s NOTE: At this point and until the adjournment of day one which occurred at 3:00 pm, the members discussed the next steps that would be needed in order to begin the deliberations of

the Science and Technology Review Panel at its February 24-25, 2003 meeting. The notes on that part of the meeting are placed below in section _____ where we discuss the Panel's plans for action.

These notes continue at this point with activities from Day 2 of the telephone conference meeting which began at 12:00 noon on **Friday, January 24, 2003**.

5. Office of Air and Radiation

Mr. Jerry Kurtzweg presented information on OAR's science and technology program. He also noted that public support for clean air remains high.

Mr. Kurtzweg presented OAR's program by Goal Area. Most OAR resources for science and technology are in Goal 1 and Goal 6. OAR science and technology is covered in the following goals:

1. Goal 1, Clean Air, programs address National Ambient Air Quality Standards, air toxics, and acid deposition. The intent is to focus on highest risk situations.
2. Goal 4, Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems the focus is on ensuring healthier indoor air.
3. Goal 5, Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response, the focus is on safe storage and clean-up of radioactive materials.
4. Goal 6, Reduction of Global and Cross-Border Environmental Risks, focuses upon reducing greenhouse gas emissions and reducing stratospheric ozone depletion.

Resources used by OAR come from the following appropriations: 1) S&T--Science and Technology which funds air and radiation labs and the mobile sources office \$106 M in FY 2003 budget, 2) EPM Environmental Program and Management funding Headquarters and regional office programs \$297 M in FY 2003 budget; 3) STAG State and Tribal Assistance Grants which fund air management programs and state radon programs \$241 M in FY 2003 budget; and Superfund \$2 M in the FY 2003 budget request. Science and technology activities are a part of each of the accounts.

Key OAR responsibilities include high-risk regulatory, market-based and voluntary programs, technical tools for states and tribes, and program assessment.

Science activities in direct support of OAR programs include (appropriation is indicated when it was so noted during the presentation):

1. Exposure and Risk Assessment: Focuses on air and radiation monitoring, emissions characterization for mobile and stationary sources (S&T and EPM), risk

assessment (S&T and EPM), radiation programs (S&T and EPM).

2. Program Development and Assessment: Modeling options and impacts and the Section 812 cost-benefit of the Clean Air Act (S&T and EPM)
3. Technology Development/Assessment: Control technology evaluation for cost and effectiveness and clean air technology (S&T and EPM).

Mr. Kurtzweg noted that the Clean Air Act dictates what OAR focuses upon for each budget request. They look at health and environmental risks, emphasize long-range planning and set priorities jointly with the Office of Research and Development. As far as coordination with ORD, Mr. Kurtzweg stated that OAR has excellent working relationships with ORD.

Panel Members asked a number of questions and suggested areas where provision of additional information by EPA could help the Panel respond to the agency's charge.

Dr. s Cantor, Watson, and Lambert were interested in the radon program. The EPA response to the FY 2003 budget comments by the SAB did not respond to advice given on a number of points (e.g., orphan issues). The Panel wondered if radon was to receive elevated interest and if there was a concern because of the voluntary nature of the radon program, one in which EPA notes that the risk is among the highest. They also asked if there was a linkage to the Department of Energy on radon issues. Mr. Kurtzweg noted that it was not so much elevated interest as it is better integration with other indoor pollutants. He also stated that he was unsure of the linkages to DOE in this regard but volunteered to find out and report that information to the Panel. Dr. Bull volunteered information on an interesting link with EPA and across two statutes for radon. This is the radon in drinking water program which permits those drinking water systems with radon levels to choose whether to invest in reductions of radon in drinking water or to invest in indoor air reductions for radon as a tradeoff where a higher risk situation is expected.

Dr. Cantor asked Mr. Kurtzweg if OAR was subject to the new Office of Management and Budget rules related to justifying programs. Mr. Kurtzweg indicated that OAR was subject to the rules. Dr. Cantor requested that investments linked to these new requirements be highlighted in the background materials to come for the FY 2004 budget.

Drs. Bull and Cantor asked for a more detailed breakout of the budget for the categories of activities mentioned by Mr. Kurtzweg. This would include also indicating which investments are external and which are internal. Members also wanted additional information on how EPA links to others inside and outside when it determines what it will do in a given science area. Also, some of the needs for evaluation and possible action are outside the OAR area of responsibility, but might fall into the area of other programs, e.g., Superfund. How do you ensure all needs are addressed and the results of others' research is brought to bear on EPA issues? Dr. Bull congratulated Mr. Kurtzweg for the focus of his presentation on Science Activities in OAR, not just those which are covered by the S&T account. It provides a more inclusive picture of your science program.

Dr. Vu pointed out that more explicit information on performance measures would be necessary for the Panel to respond to questions that it will get from the Congress when it goes to hearings on the FY 2004 budget request. Information on longer term goals in strategic plans and the annual goals and measures in other plans will be important.

Members also wondered how EPA keeps up with new issues that emerge over time. That is, how do new issues come to the agency's attention (both research and program issues). Dr. Schoeny of the Office of Water noted that the OW is constructing a data base to keep up with research relevant to their program issues that is being done by EPA, its partners, and others. Mr. Kurtzweg mentioned a small program on futures issues that is beginning in ORD.

6. Office of Water

Rita Schoeny, Science Advisor for the Office of Water, presented information on the science and technology programs of the EPA OW. She noted that two statutes were the responsibility of OW. One, the Clean Water Act which covers criteria and standards to protect human health and aquatic life, permits (total maximum daily loads), programs to protect recreational waters and food related uses, waste water management and oceans and wetlands. The Safe Drinking Water Act deals with contaminants in drinking water at the tap.

Most of OW's science is covered by Goal 2, Clean and Safe Water. The S&T budget is about \$20 M in FY 2003. Water programs also benefit from efforts under Goal 8 and Goal 3. OW uses a large amount of partnering with other government agencies (CDC, NTP) and with the regulated community (e.g., AWWA, AWWARF, WERF).

Dr. Schoeny mentioned OW's major involvement in the Integrated Risk Information System. In FY 02-03 some \$745 K is invested in peer review for 17 drinking water contaminants and to expand IRIS to microbes (e.g., *Cryptosporidium*). She also noted the OW interest with source water issues because of microbial contamination.

Dr. Schoeny noted that not all OW science and technology is under the S&T account. The EPA peer review database lists 145 products under Goal 2 for peer review. This is not covered by S&T funds.

Dr. Schoeny stated that the OW relationship with ORD is very good and improving. She noted the recently completed site visits at ORD labs for OW representatives and a number of collaborative projects with ORD.

Dr. Bull mentioned the importance of pursuing additional coordination between the Clean Water Act and the Safe Drinking Water Act. He offered an example of effluents controlled under CWA which could become precursors for the development of disinfection byproducts when source waters are treated by community water systems (e.g., dimethylamine conversion to n-nitrosodimethylamine, a potent carcinogen). Dr. Schoeny noted that NDMA is an issue that is covered in the water quality multi-year plan. OW and ORD will meet soon to discuss cross-plan issues between the water quality and the drinking water MYPs. She noted that stakeholder

groups are also pointing to the need for more CWA - SDWA coordination. OW now does a common risk assessment document for contaminants that are at issue under both statutes.

Dr. Lambert was interested in EPA outreach to other agencies, for example, CDC. Dr. Schoeny noted that in the waterborne disease area there has been good interaction. The next National Health and Nutrition Examination Survey (NHANES) will provide additional opportunities to continue the historically good interaction. Dr. Bull affirmed the improved interactions between EPA and CDC.

Dr. Zeise asked about EPA's planning with the National Toxicology Program (NTP) over time? Dr. Schoeny noted very collegial relations in this regard and that most of the money for EPA needs from NTP actually came from NTP funds.

Dr. Adams asked for additional budget details from OW for the February meeting. He also asked if the OW science and technology was core research or problem driven research? Dr. Schoeny stated that it was all problem-driven.

Dr. Adams and Dr. Vu asked if EPA was doing research on contaminated sediments. More details will be requested for the FY 2004 deliberations.

7. Office of Prevention, Pesticides and Toxic Substances

Dr. Joseph Merenda presented information on OPPTS science and technology programs. He presented information on a range of issues and focused on some that he decided were of high priority to the program. Topics discussed included:

- a. Improved risk assessment methods
- b. Acute exposure guideline levels for emergency planning
- c. Assessing cumulative risk for chemicals with a common mechanism of toxicity
- d. Extension of structure activity relationship information
- e. Test methods for endocrine disrupting chemicals
- f. Expanding tools and data for determining exposure to critical population subgroups
- g. Monitoring dioxin exposure pathways
- h. Biotechnology,
- i. Animal friendly test methods
- j. Third-party human studies
- k. Better sampling and measurement for asbestos fibers
- l. Developing methods to test for antimicrobial efficacy

Some of these issues are funded from the S&T account and others are not.

Dr. Morandi identified a USDA Children's Nutrition Center study being conducted on the nutritional aspects of breast milk. She suggested this program as a good contact for EPA's followup regarding contamination of breast milk. Dr. Merenda noted that he would check on this program. Dr. Lambert was also interested in this topic and suggested the potential usefulness of

breast milk data to EPA. He was also interested in information on the investment in the National Children's Study which is now in the planning phase.

As with other presenters, the members noted that they would like additional breakout of the resource information for the OPPTS programs and additional information on who they coordinate with in planning and conducting their programs.

8. Planning and Assignments for the Deliberations

Dr. Matanoski stated that the Panel would need to have a draft report completed at the end of the February meeting. This would then go through some edits and concurrence and then go to the SAB Executive Committee for review and approval. Congressional hearings will follow.

The members discussed the continuing issues that were a part of last year's report and which are listed on this year's project sheet. It was noted that these are not a part of the charge, but they are the primary questions that Dr. Matanoski was asked last year during the Congressional hearing and would likely be so this year. The major issue was whether some of the issues could be answered with the information now available, or reasonably available, for the February meeting. They seem to some to be an outgrowth of the budget review and not a part of that interaction. Others felt that it could be at least addressed at some level. These issues are, in essence, the bigger picture of EPA's science and technology. They are beyond the S&T budget account, though the S&T account is a part of the overall program. These will be addressed in some form, by requesting additional information from EPA, so that the Chair will be prepared for expected questions from the Congress.

Information on performance measures will be important in regard to these questions. Dr. Bull noted that multi-year plans may help us get at this information.

Information on peer review was also of great interest to the Panel. Dr. Bull mentioned the substantial effort of RSAC in this issue last year. It is still of interest, but the question is can we say much without a study of the issue. The panel agreed that it would be important to, at least, ask the agency to provide information on the type of peer review that has been done on the programs that they are presenting to the SAB in this review (what peer review was conducted, what role did it play in planning, etc.) This might be handled by a fact sheet on peer review or with more specific information on only the new efforts in the program. The intent should be to provide information that will help the Chair answer the question if and when it is asked in the Congressional hearings.

The Panel agreed to form five writing teams, one for each of the charge questions. The starting point will be to consider last year's report and the agency response. Consider this year's budget documentation (FY 2004). Prepare preliminary comments for each question, discuss them in subgroups at the meeting after interacting with the agency on the FY 2004 budget. Prepare a composite piece as a rough of the first draft report. Then edit the rough draft at the meeting to prepare the meeting draft.

Writing groups will focus on their specific questions; however, members can also provide comments to other writing groups to which they would like to contribute insights and information.

The additional information to be requested should provide a uniform picture across EPA offices on their science and technology; there will be a request to discuss how the existing ten-goal strategic structure for EPA's programs cross-walks into the new five-goal structure; dollar allocations to each program component within each goal, breakouts for each program relative to the core-versus problem driven dichotomy, how EPA responds to the OMB criteria for usefulness to National priorities (ROBIN TELL ME MORE ON THIS), and to attempt to get insights into what items they will not be able to do with the FY 2004 budget levels.

Assignments:

a. Question 1: Does the budget request reflect priorities identified in the EPA and ORD Strategic Plans?

i. Members:

Dr. Watson
Dr. Lambert
Dr. Matanoski

b. Question 2: Does the budget request reflect coordination between ORD and the Program Offices, including identification of the science needed to support major upcoming rules and decisions?

i. Members:

Dr. Zeise
Dr. Adams

c. Question 3: Does the President's budget request provide adequate balance and attention to the core and problem-driven research needed to provide satisfactory knowledge for current and future decisions EPA will be required to make?

i. Members:

Dr. Cantor
Dr. Hopke

d. Question 4: Is the EPA research and development program addressing the important issues needed to meet EPA's strategic objectives and protect human health and the environment in the US and globally? What important

issues are not receiving adequate attention at the requested level of resources provided for the R&D program and the S&T budget?

i. Members:

Dr. Bull
Dr. Cantor
Dr. Lambert

e. Question 5: How can EPA better use measures of performance that focus on environmental outcomes to identify the impact of its research and development program and the funds that Congress provides for that program?

i. Members:

Dr. Inyang
Dr. Grasso
Dr. Morandi

9. Action Items:

The additional information to be requested should provide a uniform picture across EPA offices on their science and technology; there will be a request to discuss how the existing ten-goal strategic structure for EPA's programs cross-walks into the new five-goal structure; dollar allocations to each program component within each goal, breakouts for each program relative to the core-versus problem driven dichotomy, how EPA responds to the OMB criteria for usefulness to National priorities (ROBIN TELL ME MORE ON THIS), and to attempt to get insights into what items they will not be able to do with the FY 2004 budget levels.

Obtain Information on the following:

- a. S&T vs Other Components of EPA Science
 - i. How to distinguish these
- b. Copy of the New Strategic Plan architecture should be sent to the panel.
- c. Multi-year plans for the panel.
- d. Socioeconomics mvp; information on coordination in its development.
- e. Identify the impacts that are caused (delays in new starts) by not having an appropriations bill in place.

- f. Homeland security strategy document from the website - obtain for panel.
- g. Get resource tables from Amy Battaglia (by goal by year, fact sheets, performance information, etc.)
- h. Better information on Key Programs (highlighted last year at end of Budget in Brief.
- i. Additional information on science programs under the other appropriations.
- j. More detailed breakouts on resources (e.g., for programs discussed, what is the resource allocation for the program from specific appropriations or conversely if an appropriation is given in the aggregate, a more detailed breakout of the total for each of the program components carried within that account (or within that goal or objective or other aggregated category of activity). Information on the investment in the National Children's Study which is now in the planning phase was an area of interest to the Panel.

More detailed breakout of the budget for the categories of activities mentioned by Mr. Kurtzweg. This would include also indicating which investments are external and which are internal.

k. Information showing the program in three categories, the base program that has existed over time and which is the continuing core of Agency responsibilities (Foundational Investments); the programs that are relatively new (e.g., gained emphasis relatively recently within the last budget cycle or so; and the components that are new in this budget request - things that strengthen EPA's science and keep it at the cutting edge (New and Innovative Investments). The desire is not just for dollar allocations, but information showing the content of the programs.

l. What type of links does EPA have on its specific science and technology programs within the agency and outside the agency? Please provide explicit information on the coordination that is a part of each of the program areas that the Agency describes in its science and technology presentation for the February S&T review. Link the to the Multi-year planning guidance to the extent that such coordination occurs subject to that guidance and specific those things which are in addition to the guidance. Clarify how EPA ensures that needs in a specific pollutant topic are brought to the table for all programs with a need for the knowledge and how EPA learns of activities being conducted outside the Agency but which could generate knowledge of importance to EPA's mission.

m. Dr. Cantor asked Mr. Kurtzweg if OAR was subject to the new Office of Management and Budget rules related to justifying programs. The panel requested that investments linked to these new requirements be highlighted in the background materials to come for the FY 2004 budget.

n. Members also wondered how EPA keeps up with new issues that emerge over time. That is, how do new issues come to the agency's attention (both research and program issues).

o. Provide information on the types of performance measures that EPA is associating with each of the programs in their science and technology.

p. Provide information on the type of peer review that has been done on the programs that they are presenting to the SAB in this review (what peer review was conducted, what role did it play in planning, etc.). This might be handled by a fact sheet on peer review or with more specific information on only the new efforts in the program. The intent should be to provide information that will help the Chair answer the question if and when it is asked in the Congressional hearings.

q. Provide information to show the contents of those program components thought of as Core Research and those thought of as Problem-Driven Research.

I certify that these minutes are true and represent the content of this meeting to the best of my knowledge.

/ Signed /

Dr. Genevieve Matanoski
Chair
Science and Technology Review Panel

/ Signed /

Mr. Thomas Miller
Designated Federal Officer
Science and Technology Review Panel